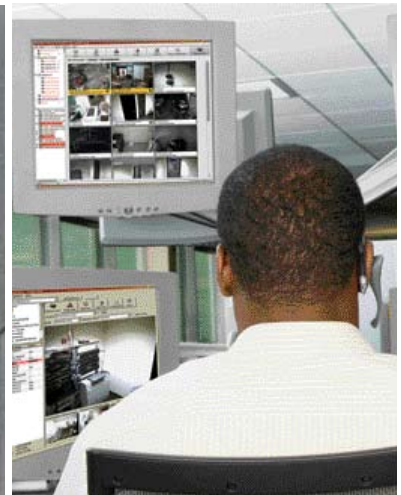




Data Centers,
Server Rooms, and
Wiring Closets

On-demand Architecture
for Network-critical
Physical Infrastructure



*Changing the way the world designs
data centers – and now even better!*



Introduction

> BUSINESS AND IT TRENDS	2
> KEY CONSIDERATIONS OF NCPI	4

Modular Systems

> INFRASTRUXURE™ SYSTEMS FOR HIGH DENSITY	6
> INFRASTRUXURE SYSTEMS FOR 1ST TIME DATA CENTER USERS	8
> INFRASTRUXURE SYSTEMS FOR DATA CENTER RESTRUCTURING	10
> INFRASTRUXURE SYSTEMS FOR VOIP	12

Mobile Systems

> INFRASTRUXURE EXPRESS	14
-------------------------	----

Conventional Systems

	16
--	----

Components

> SERVICES	18
> MANAGEMENT	22
> SECURITY AND ENVIRONMENTAL	24
> COOLING	26
> RACKS	30
> POWER	34

Tools and Resources

	38
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In today's competitive economic environment, organizations are doing all they can to stay ahead of the competition. To do so they must be aware of the industry's most important business trends such as:

- IT Productivity
- IT Business Value
- Real Time Enterprise (Adaptive and Predictive)
- Supply Chain Automation and Optimization
- Data Warehousing and Mining
- Integrating/Enhancing Systems
- Wireless and E-Commerce
- Regulatory Compliance
- Data Security
- Outsourcing

In many cases this means adopting the latest equipment and new technology-dependent processes including:

- IT Environment Changes (Server Consolidation, Migration and Virtualization, SAN Deployment)
- IT Upgrades/Modification
- Real-Time IT (Adaptive and Predictive)
- New Technology Deployment (Blade Server, RFID, Grid & Utility Computing)
- New Enterprise Capabilities (CRM, KM, BI & Collaborative)
- Global Data Center Integration
- Converged Networks (VoIP, WLAN, Utility/Embedded Computing)
- Business Continuity/Disaster Recovery



InfraStruXure™ Improves Agility through Increased Speed of Deployment

Traditional



InfraStruXure™

1 to 3 wks

2 to 4 weeks

IT project timeline

NCPI deployment on time

NCPI deployment past deadline

The InfraStruXure™ approach includes a revolutionary on-line design and modular system components that dramatically increase the speed of deployment. Now NCPI deployment can keep pace with the deployment of new IT projects.

Together, these business and technology trends are forging new types of IT environments. Although these environments are improving productivity, many are also creating new and unforeseen availability challenges. For instance, housing high-density blade servers in racks greatly increases the likelihood of **heat related downtime from hot spots and inadequate cooling**. (See page 6 and 26 for more information on APC's cooling innovations). Such equipment also places strains on the power supply, increasing the chance of hardware damage and data loss.

However, due to the fast pace of technology adoption, issues regarding availability and upfront costs are no longer sufficient to make adequate business decisions. Agility, or business flexibility, and low total cost of ownership (TCO) have become equally important to companies that will succeed in a global, ever-changing marketplace.

InfraStruXure™ fully integrates power, cooling, rack, management and services. This on-demand architecture allows the selection of standardized components to create a solution through modular and mobile configurations.

By utilizing APC Solutions and Resources, this award-winning, patent-pending approach provides increased availability, improved adaptability and speed of deployment, as well as lower TCO for all IT environments. APC Global Services help prevent problems through the entire lifecycle of the Network-critical Physical Infrastructure (NCPI.) Advanced software and other management devices ensure visibility and control over an entire NCPI, while resources, from white papers and application notes to expert support staff, help users stay informed about the latest trends in system availability.

Standardization Improves Availability

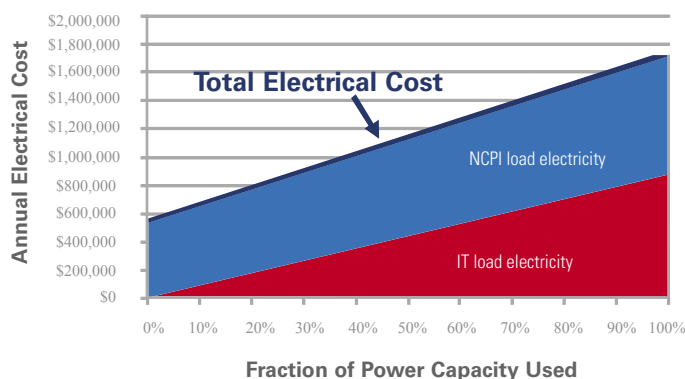
NCPI must resolve three challenges: reduce Mean Time to Recover (MTTR), high density capability and reduce the chance for human error.

STANDARDIZE

- | | |
|--|--------------------------------|
| ■ Modularize | ■ To Eliminate... |
| ■ Pre-test systems in the factory | ■ One time engineering |
| ■ Hot swappable components | ■ Unique training requirements |
| ■ Pre-integrate power – cooling – rack | ■ On-site assembly |
| ■ Management & diagnostics | ■ On-site testing |
| | ■ Custom programming |

Standardization accelerates learning at all levels, reducing human error

InfraStruXure Reduces TCO Through Efficiency



Annual electrical cost for a typical 1 MW data center as a function of design capacity utilized

HARVARD MEDICAL SCHOOL

"APC's InfraStruXure™ data center architecture featured the standardized approach we were looking for. It's the only data center power system we encountered whose fundamental architecture was based on pre-engineered and pre-tested building blocks designed to work in a truly integrated fashion."

John Halamka
Chief Information Officer
Harvard Medical School

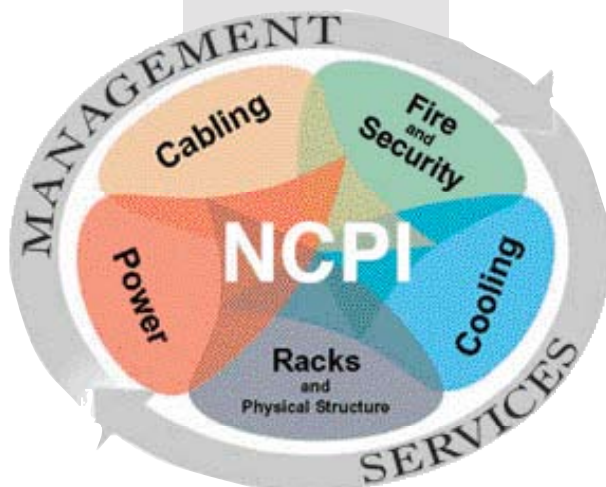


Reliable IT Business Operations

People

Process

Information Technology



Such agility is particularly important in the underlying, physical foundation of an IT system that ensures business continuity. Also known as Network-critical Physical Infrastructure (NCPI), this physical layer consists of power, cooling, racks and physical structure, security and fire protection, cabling, as well as the management and servicing of these elements.

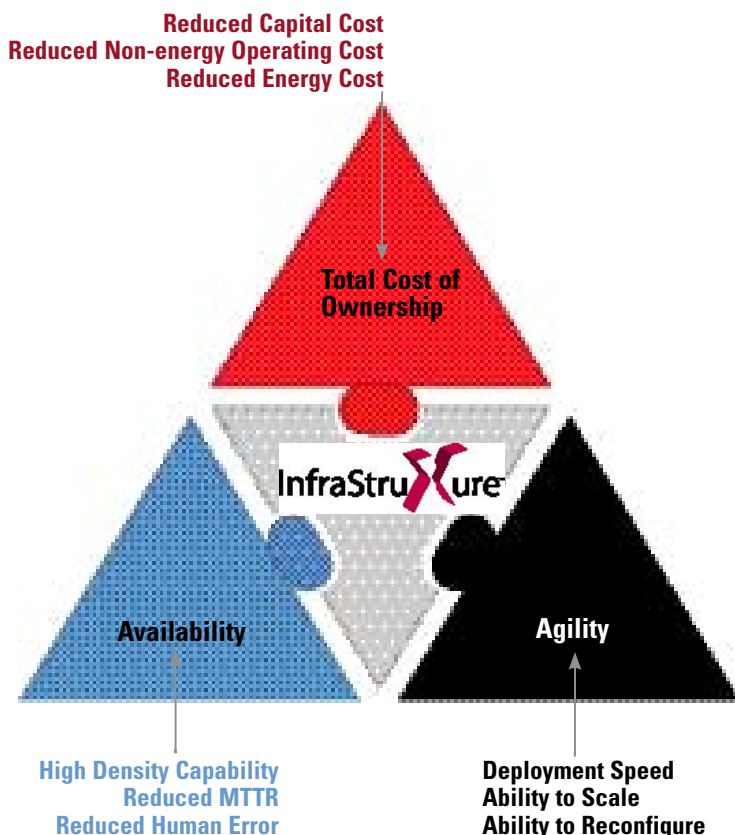
Without an integrated and reliable NCPI, an IT system is not available. This impedes processes and the ability of employees to efficiently carry out their tasks, all of which weakens business profitability and competitiveness.

Traditional NCPI based on legacy architecture does not facilitate business agility. It is unable to keep up with unpredictable growth in server rooms and data centers because of its one-time-engineered, static approach. With its multiple-vendor components traditional NCPI also increases TCO, particularly through expensive service contracts.

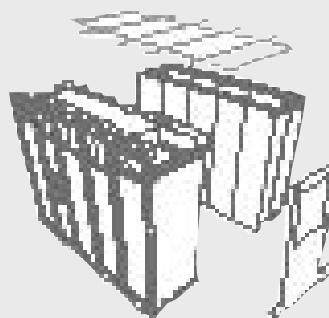
Both these factors bring about erratic costs and poor budgeting ability. With limited IT budgets and no ability to allocate costs to business units, IT departments installing legacy systems try to predict what their NCPI requirements will be ten years from now and spend money on under-utilized systems that do not match current needs. By guessing power and cooling requirements five to ten years in advance and building that capacity today many organizations end up wasting capital and operational expenditures.



Built from standardized, modular components that are pre-engineered to work together, InfraStruXure™ enables organizations to install only what is required today, yet easily scale to meet future demands. APC NCPI solutions for data center and server room environments are also available in three types of configurations: Modular, Conventional and Mobile systems.



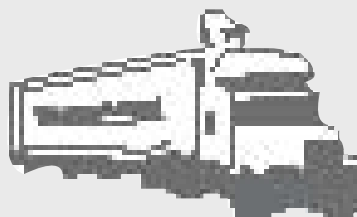
APC SYSTEMS FOR DATA CENTERS AND SERVER ROOMS



Modular Systems

p. 6

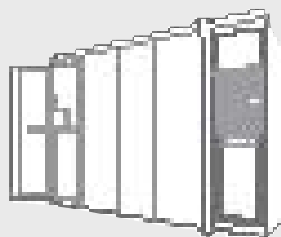
Modular systems are complete, pre-integrated systems that users can quickly and easily select for specific IT environments without spending the time needed for customization. They are an ideal solution to rapidly respond to IT trends such as increased density and converged voice/data applications.



Mobile Systems

p. 14

Mobile systems, such as APC's InfraStruXure Express, are true on-demand mobile data centers, which can be provided overnight and are capable of supporting up to 250 servers. These solutions are designed for businesses working on transitional IT projects or developing robust business continuity and disaster recovery programs.



Conventional Systems

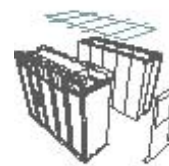
p. 16

For users that prefer to customize their NCPI, **Conventional systems** offer a complete range of individual components and services required to build a data center or server room. These systems have standard lead times and installation requirements that are typical in unique or large IT environments.

INFRASTRUXURE™ SYSTEMS FOR HIGH DENSITY

The deployment of new technology such as blade servers and grid computing can easily create high-density environments. APC has a range of resources and solutions targeted specifically for high-density applications such as blade servers. All are designed to improve system **availability** and **agility**, allowing quick and effective deployment in data centers of all sizes while offering the lowest **total cost of ownership (TCO)**.

Modular Systems



InfraStruXure
DATA CENTERS ON DEMAND

NCPI Challenges

NCPI Trouble Areas

To demonstrate the value of IT to business, many organizations have begun to deploy new technology, such as blade servers. Without adequate cooling this leads to hot spots, as well as poor power distribution and limited management.

Unknown Data Center Capabilities

The move towards increased IT productivity is leading to server consolidation and virtualization. As a result many organizations are operating with unknown data center capabilities or oversized NCPI.

Limited Time to Deploy

Only adaptable enterprises will prosper in today's competitive economic times. Business moves so quickly there is limited time to deploy new technology.

Need for Special IT environment

A poorly maintained technology room environment will have a negative impact on server room operations. There is now a need for special or expensive IT environments for new technology adoption.

APC has a range of resources and solutions targeted specifically for high-density applications such as blade servers. All are designed to improve system availability and agility, allowing quick and effective deployment in data centers of all sizes while offering the lowest total cost of ownership (TCO).

All InfraStruXure Systems are scalable to hundreds of racks, from small to large data centers



Model ISXT120KHD1R (shown). Other size models available. Please visit www.apc.com for more information.



Enhance the security of your InfraStruXure™ system. Protect your NCPI from physical and environmental threats. (see page 24 for more information)

Blade Ready Assessment Service

Are you ready for blade servers? APC has the resources to help you understand and implement high density in your IT environment.



Before investing in expensive new equipment, make sure you understand the current physical limits of your IT environment.

Conducted by APC Global Services Professionals, a Blade Ready Assessment Service supplies you with the information necessary to design your facilities for optimal performance. It includes the following:

- an analysis of the ability of the current installation to support blades
- an analysis of the data calculating the current power and cooling constraints
- measurement of existing airflow conditions
- measurement of existing temperature conditions using thermal imaging
- measurement of the current power and cooling capacity at the room level and at the row level
- recommendations for expanding total blade capacity and
- recommendations for increased density deployment

LOWER CAPITAL COSTS THROUGH RIGHT-SIZED COMPONENTS AND "SYSTEM-LEVEL" PRICING

SERVICES

- Turn-key installation services enable quick deployment and minimal impact to existing infrastructure

MANAGEMENT

- Enhanced management increases availability by providing a floor-layout view with kW per rack of the data center environment
- Alarm alerts users of potential problems, such as heat thresholds being exceeded, eliminating the possibility of an overloaded circuit

SECURITY AND ENVIRONMENTAL

- Digital video monitoring enables you to easily monitor individual racks to entire data centers to determine "who did what when," improving your response to resolution time

COOLING

- Designs are based on major OEM blade server manufacturers products to minimize the engineering time required in integrating and pre-testing the systems
- New air containment systems increase cooling predictability in extreme high-density environments with rack-level solutions that neutralize the hot exhaust air at the rack or row level
- Scalable, self-contained rack enclosure with cooling capacity for high-density servers in space constrained and/or uncontrolled environments

RACK

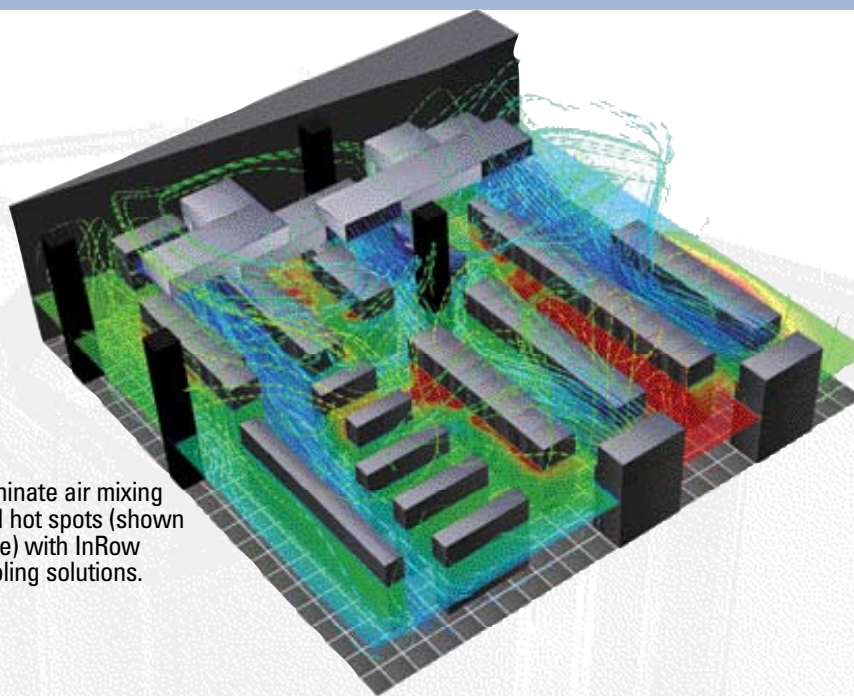
- Enclosure design enables a variety of cooling options to ensure high availability at any density
- New high density rack-mount PDUs improves availability with higher rack-power capacity in a smaller form-factor
- The core building block for InfraStruXure™ systems

POWER

- Vendor-specific systems for optimal performance environment
- Hot-swappable, user-replaceable modules lower mean-time-to-recovery (MTTR)
- Scalable design lets you buy what you need now, then add power or runtime capabilities later
- Ability to support up to 25kW in a single rack

InfraStruXure InRow Systems

InfraStruXure Systems can cool densities of all levels, from low to very high, using new data center InRow cooling solutions.



Eliminate air mixing and hot spots (shown here) with InRow cooling solutions.

- Placing the unit in the row of racks moves the source of cooling closer to the heat load. This eliminates air mixing and provides a predictable cooling architecture
- Hot swappable fans allow unit to remain operational if a fan replacement is required
- Modular design provides scalable solutions to add cooling as demand increases
- Variable speed fans reduce energy consumption during off-peak cooling periods
- Rack inlet control guarantees inlet temperature to IT equipment

INFRASTRUXURE™ SYSTEMS FOR 1ST TIME DATA CENTER USERS

The challenges of improving, and even maintaining IT productivity, have put un-experienced pressures on today's IT and Facility Managers. Converging networks (with major upgrades and modifications) while ensuring strong business continuity and disaster recovery strategy is an overwhelming task. APC InfraStruXure™ Systems are ideal for departments with limited experience or resources in designing, operating and building data centers and server rooms, to **increase availability, improve agility, and decrease TCO.**

Modular Systems



InfraStruXure
DATA CENTERS ON DEMAND

NCPI Challenges

No Experience or Limited In-House Skill Set

Regulatory and compliance trends have forced many organizations to focus on business continuity and disaster recovery. Yet many have no experience with designing, building or operating data centers.

Unpredictable Growth

The need to improve IT productivity is leading to IT modifications and upgrades. This in turn creates unpredictable growth and poor or unknown availability levels.

Limited Data Center Space for NCPI

To keep up with the competition many organizations want to implement wireless and e-commerce applications, yet have limited data center space for the necessary VoIP equipment.

APC has a range of resources and solutions targeted specifically for first-time data center users. All are designed to improve system availability and agility, allowing quick and effective deployment in data centers of all sizes while offering the lowest total cost of ownership (TCO).

All InfraStruXure™ Systems are scalable to hundreds of racks, from small to large data centers



Enhance the security of your InfraStruXure™ system. Protect your NCPI from physical and environmental threats. (see page 24 for more information)

Model ISXT216KPS1RSX (shown). Other size models available. Please visit www.apc.com for more information.

Management

Whether managing a single device, multiple devices, or a mixture of device types, APC management solutions are easy to use and deploy.

See page 23 for more information



SYSTEM IMPROVES AGILITY BY SHIPPING FULLY ASSEMBLED WITH QUICK-CONNECT COMPONENTS AS WELL AS MANY MOBILE/TURNKEY FEATURES TO SPEED DEPLOYMENT TIME

SERVICES

- Pre-engineered systems meet the needs of a particular application, minimizing design and installation time

MANAGEMENT

- Unique Rack Manager allows you to quickly check the status of rack components without entering the rack or going to a workstation
- Tailor pre-configured systems to meet custom requirements to simplify design process and minimize design time
- Metered rack-mount power distribution equips on-site installers with the ability to monitor the aggregate current draw as equipment is connected to the unit

SECURITY AND ENVIRONMENTAL

- Access control systems for each rack ensure that only authorized personnel can access key resources, reducing risk of sabotage or human error

COOLING

- Range of cooling solutions (In-row cooling, cooling distribution units, ventilation systems, and air removal systems) offers "right-sized" rack-and-room-level designs
- Ships fully assembled for quick deployment, with integrated caster to enable easy mobility (rolls into place)

RACK

- Easier installation with toolless rail design, access to rack feet, and improved cable management features (larger roof access and accessories)
- Rack based design provides a compact footprint for better utilization of floor space
- Overhead cable management helps eliminate cable stress and maintain a neat, organized cable layout within an enclosure or rack
- The core building block for InfraStruXure™ systems

POWER

- Integrated UPS and power distribution minimizes cost and offers compact footprint
- Online, redundant power protection
- Scalable power and runtime for space-constrained server rooms and voice and data networks

Installation Service

Purchasing Installation Services from an APC certified field service engineer allows you to take advantage of project engineering expertise gained from years of experience designing and implementing complex infrastructure solutions. An APC certified installation and commissioning of your solution ensures your equipment is configured for optimal performance, saving you time and money and extending the life of your hardware solution. With the option of installation packages or individual service components, our installation services are structured in such a way as to allow you to pick and choose what you would like APC to do for you.



The APC Design Portal for Wiring Closet and Server Room systems is a fast and easy way to customize your system as needed ensuring product compatibility for ease of integration.

INFRASTRUXURE™ SYSTEMS FOR DATA CENTER RESTRUCTURING

Mergers and acquisitions, outsourcing and business process innovation all make the world of business an unpredictable place. In response, data centers today have to be more **agile and available, while keeping a low TCO**. Whether you are moving from a traditional data center, adding a disaster recovery center, or even in the process of server consolidation or business expansion, APC's pre-engineered solutions take the guesswork out of data center NCPI design.

Modular Systems



InfraStruXure™
DATA CENTERS ON DEMAND

NCPI Challenges

Oversized or Undersized NCPI

Business concerns such as worker efficiency, outsourcing and productivity are creating the need for on-demand, real-time enterprises. Economic uncertainties often lead to either oversized or undersized NCPI.

Fear of Change in the Data Center

Improved business processes, innovation and re-engineering all require new technology deployment such as blade servers, RFID and Grid Computing. This in turn creates hot spots, power distribution problems and a lack of integrated manageability.

Unpredictable Costs

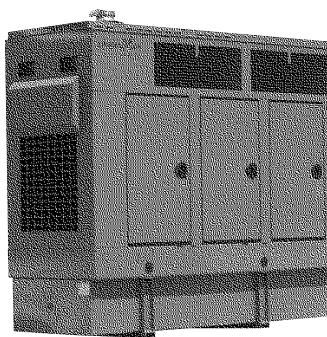
New enterprise capabilities such as CRM and knowledge management often highlight a lack of standardization in IT systems. The results include unpredictable costs and the inability to budget.

Service Execution and Costs

Mergers and acquisitions are leading the IT trend of global data center integration, yet poor execution of service or expensive service contracts can hinder this process.

APC has a range of resources and solutions targeted specifically for data center restructuring applications. All are designed to improve system availability and agility, allowing quick and effective deployment in data centers of all sizes while offering the lowest total cost of ownership (TCO).

Generator (Optional)



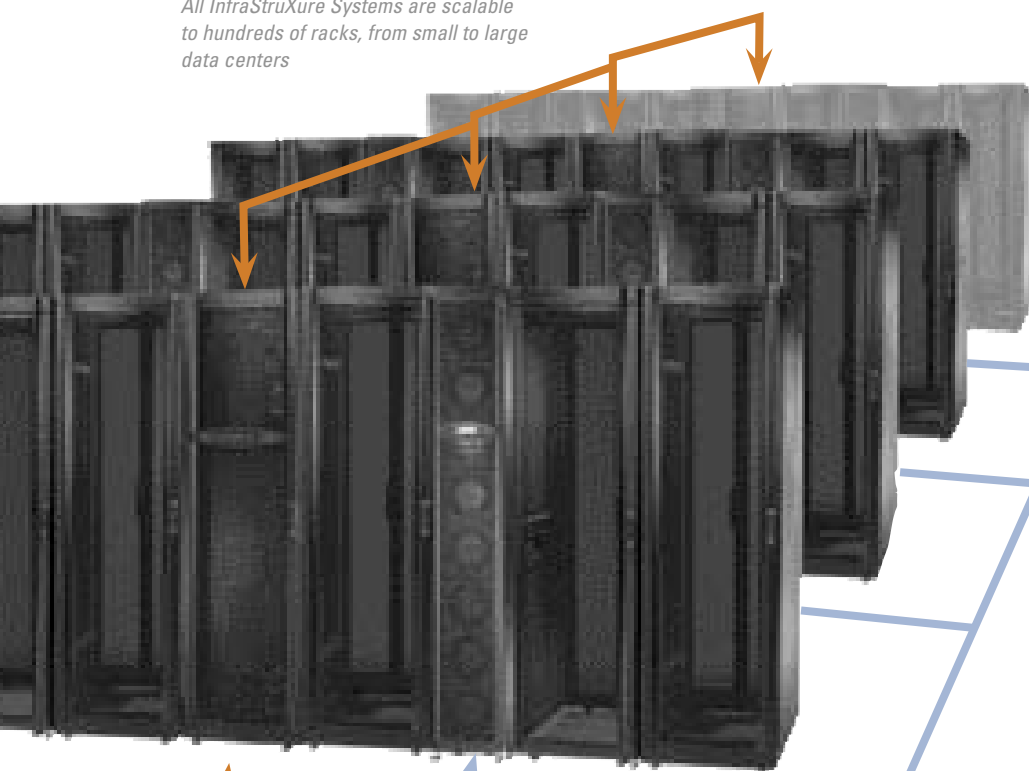
Symmetra MW

- Ideal for large data centers, complete buildings, healthcare and other critical facility protection requirements
- Can be scaled for rigorous and changing electrical demands
- Provides increased availability through internal N+1 configurability, predictive failure notification and multi-module paralleling features
- Best-in-class efficiency and reduction in rating of electrical infrastructure- wires, transformers and generators

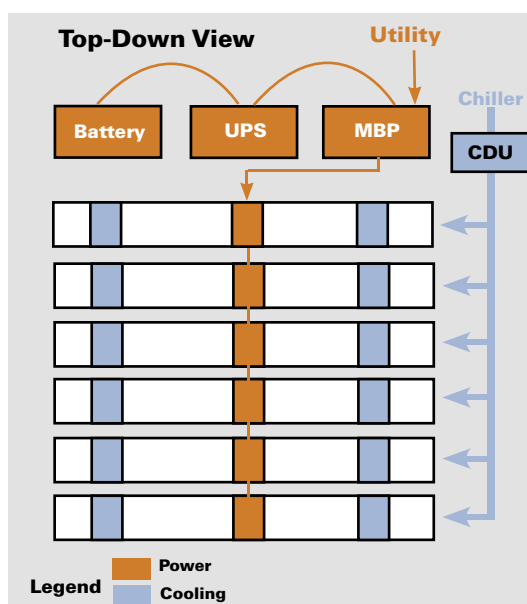
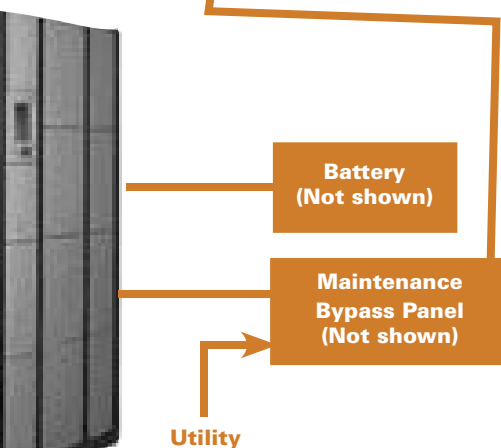


Enhance the security of your InfraStruXure™ system. Protect your NCPI from physical and environmental threats. (see page 24 for more information)

All InfraStruXure Systems are scalable to hundreds of racks, from small to large data centers



Cooling Distribution Unit (CDU) and Chiller
Not shown



THESE SYSTEMS IMPROVE SPEED OF DEPLOYMENT AND YOUR ABILITY TO ADDRESS EVER CHANGING BUSINESS NEEDS— MAKING IT IDEAL FOR TECHNOLOGY ROLL-OUTS, REFRESHES OR CHANGES TO YOUR IT ENVIRONMENT.

SERVICES

- Installation services provide expertise to ensure appropriate project execution eliminating human error

MANAGEMENT

- Minimize implementation time by quickly integrating your new design into existing management system
- Next generation tool validates design to ensure proper configuration

SECURITY AND ENVIRONMENTAL

- Monitor critical environmental conditions, allowing for earlier detection and faster problem resolution

COOLING

- New In-row cooling systems offer predictable cooling to the IT environment. These systems closely couple cooling with the heat load which eliminates mixing and hot air recirculation into sensitive IT equipment
- In-row air conditioning system with a horizontal airflow pattern specifically designed for hot aisle/cold aisle configurations
- Warm exhaust air is drawn from the hot aisle, cooled, and distributed into the cold aisle, ensuring that equipment inlet temperatures will be constant and adequate for proper operation

RACK

- Compact rack design improves mobility within your facility
- Vendor-neutral enclosure improves adaptability for diverse IT environment
- Advanced cooling, rack-mount power distribution and cable management for server and networking applications
- The core building block for InfraStruXure™ systems

POWER

- Fault-tolerant and internal N+1 configurability with predictive failure notification
- Best-in-class efficiency decreases TCO
- Modular power components, manageable external batteries and self-diagnosing features greatly reduce mean time to repair (MTTR)

Project Management

APC Project Management Services are designed to assist you with rollout of large-scale projects, allowing you to focus on your core business objectives. Our industry experienced project managers are trained to guide project coordina-

tion, communication and project budget management to assure your projects are completed on schedule and within budget, avoiding costly overruns saving you both time and money.

INFRASTRUXURE™ SYSTEMS FOR VOIP

If you are planning to deploy (or have deployed) Voice over Internet Protocol (VoIP) or IP Telephony, your converged network carrying data and voice becomes very critical. Your tolerance for downtime becomes zero. APC InfraStruXure™ Systems provide end to end protection for your Network Critical Physical Infrastructure (NCPI) and can significantly **improve network availability, improve wiring closet agility, and decrease overall TCO.**

Modular Systems



InfraStruXure™
DATA CENTERS ON DEMAND

NCPI Challenges

Various Voltage Requirements

To increase IT productivity, organizations install converged networks, which leads to power problems such as various voltage requirements and increased loads.

Lack of Visibility and Control

Although converged networks simplify IT environments, there is often a lack of visibility and control over the system, whilst increased power loads create over heating.

Poor or Unknown Availability

IT business value is one of the main reasons why converged networks are implemented, yet VoIP equipment demands higher levels of availability than traditional telco networks.

Limited NCPI Space

One barrier to availability is the housing of VoIP in small, irregular shaped rooms that do not have adequate ventilation.

APC has a range of resources and solutions targeted specifically for VoIP applications. All are designed to improve system availability and agility, allowing quick and effective deployment in data centers of all sizes while offering the lowest total cost of ownership (TCO).



Model ISXT15KVS1RSX (shown). Other size models available. Please visit www.apc.com for more information.

All InfraStruXure™ Systems are scalable to hundreds of racks, from small to large data centers



Additional enhancement: **wiring Closet Ventilation Unit**
(see page 29 for more information)



Enhance the security of your InfraStruXure™ system. Protect your NCPI from physical and environmental threats. (see page 24 for more information)

Improve Availability and Agility of your VoIP Network with Enhanced Security Features



APC NetBotz™ intelligent network appliances provide active monitoring and early warning of environmental and human factors which threaten the availability of your Network-critical Physical Infrastructure (NCPI). Our monitoring solutions adapt to your needs with modular expandability, easy 3rd party sensor integration, and customized alert policies and notification.

See page 24 for more information.

SYSTEMS THAT ARE DESIGNED AND IDEAL FOR VOICE OVER IP APPLICATIONS

SERVICES

- Ships fully assembled with quick-connect components as well as many mobile/turnkey features to speed deployment time

MANAGEMENT

- Tailor pre-configured systems to meet custom requirements to simplify design process and minimize design time
- Minimize implementation time by quickly integrating your new design into existing management system
- Manage your system locally or remotely with the system-level management device (Rack Manager)

SECURITY AND ENVIRONMENTAL

- Enhance the system with access control systems for each rack ensures that only authorized personnel can access key resources, reducing risk of sabotage or human error

COOLING

- Enhance your system with our new in-row, scalable cooling for expansion and consolidation of your VoIP networks
- Ability to add new air removal system which integrates local management for increased availability

RACK

- New racks improve operating agility with multi-use wide designs that can be used for both networking and server applications
- Design makes assembly quick and easy - requires only one person to fully assemble each unit
- Easily route, manage, and access large numbers of data cables with integrated rear cable management channels
- The core building block for InfraStruXure™ systems

POWER

- Double conversion on-line topology protects data by supplying reliable, network-grade power for optimal availability
- Unlimited extended-runtime can be added to comply with aggressive runtime demands of "always on" business-critical systems

Network Integration Service



Allowing us to help plan rack configuration and perform the actual server migration and cable management will ensure your solution is configured for optimal airflow and performance.

From server migration and cable management to software installation and configuration, APC Global Services Network Integration Engineers can assist in all tasks associated with your move to a new system.

Having your APC management software installed by our APC Certified Software Engineers will ensure proper integration into your existing monitoring system, letting you monitor your network the way you need to.

INFRASTRUXURE™ EXPRESS

THE BEST WAY TO GET NCPI OVERNIGHT

AVAILABILITY

Increases availability of IT networks with Tier IV level design

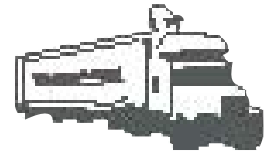
AGILITY

In-stock, immediately deployable mobile data center with no site limitation. Increases adaptability with an open architecture configurable to any IT environment

TOTAL COST OF OWNERSHIP (TCO)

Enables IT projects that were previously cost prohibitive

Mobile Systems



InfraStruXure
DATA CENTERS ON DEMAND



The InfraStruXure™ Express is the ideal platform for processing data and performing communications technology functions in nontraditional places or under challenging circumstances. With built-in redundancy and an integrated network operations center, InfraStruXure Express is ideal for quick deployments, disaster recovery plans, and business continuity initiatives.



InfraStruXure™ Express data centers are designed to meet today's challenges quickly, efficiently, and cost effectively.

► On-Demand Mobile Data Center Capable of Supporting 125 – 250 Servers



► **Power**

- Accepts up to 2 utility feeds as “normal power”
- Equipped with a 120kW Prime Rated Generator (configurations to 400kW)
- Designed to export electrical power to meet external needs

► **UPS**

- Features a 2 (N+1) 40kW UPS system (other configurations available)
- Provides 4.5 minutes of battery time at full load

► **Cooling**

- Features 50kW of precision cooling
- 17kW of additional cooling (capacities up to 50kW, resulting in 50kW-2N)
- Complete humidification system including water tank

► **Management**

- Features InfraStruXure™ Manager for monitoring critical functions

► **Fuel Options**

- Incorporates flexibility in the selection of diesel fuels
 - Operates on fuel stored in its “day-tank”, and/or
 - Can use fuel stored in a tractor’s saddle tanks and/or
 - May connect to an external “skid tank”

► **Fire Detection**

- Includes a cross-zone fire detection system
- Independent detection zones above and below the floor
- Incorporates photoelectric and ionization detectors

► **Fire Suppression**

- Utilizes FM-200 fire extinguishing agent
- Fire suppression tanks for fire detection zone

► **Access Control**

- Proximity card readers and HID security card technology
- Hardware and software for reliable security

► **Command and Control**

- Incorporates a Network Operations Control center

► **Security**

- Optional security cameras for internal/perimeter security

► **Satellite**

- Optional satellite link (with speeds to suit your needs)

INFRASTRUXURE™ CONVENTIONAL SYSTEMS

Conventional Systems



InfraStruXure
DATA CENTERS ON DEMAND

The majority of conventional systems are considered Engineer To Order (ETO) solutions that have unique engineering requirements, custom designs and configurations for specific data center needs. This requires time and resources to perform, and is typical for larger projects with megawatt specifications.

APC's Conventional Systems center on our diverse team of experts that assist in enabling specific customer problems or complex projects that call for skilled individuals in NCPI.

- Application Engineers
- Field Engineers
- Configuration Team
- Regulatory Compliance Engineers
- Project Engineering
- Custom Engineering



"I feel that you should always get a quick response when you call APC, yet I still take the time to explain the problem thoroughly."

I use a friendly and professional tone with my customers to help build a strong relationship. I once had an issue where a customer received an incorrect solution and solving it came down to either providing a makeshift response on site or bring the bullet and paying for what the customer needed. It cost substantial dollars, but we supplied the right answer and gained a satisfied customer.

Brad Perkins | says "Field Service Eng. online"
Westport, MA



"My focus is on InfraStruXure™ and the support and configuration of three phase UPSs. Understanding my client's exact needs so that I can supply the perfect solution is critical."

Elsebeth Soendergaard | Configuration Team
Kolding, Denmark



"I know that quiet customers are not necessarily happy customers. For this reason, I constantly ask myself, "Is this solution best for this particular client?"

Tetsuji Yamamoto | Country Services Manager
Tokyo, Japan

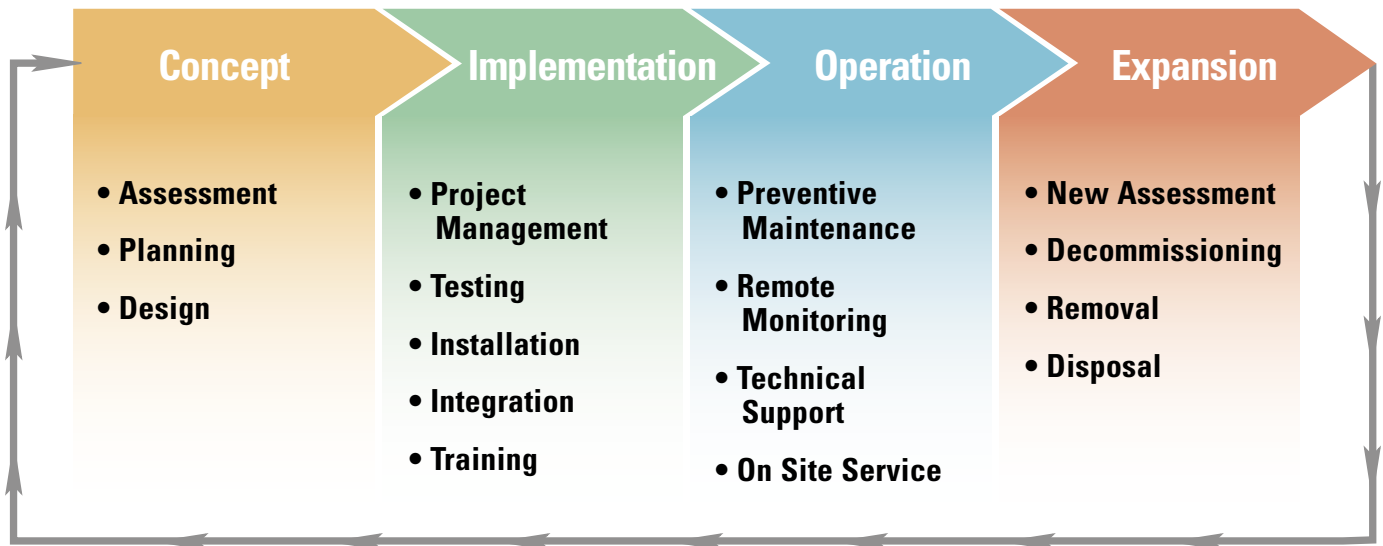
SERVICES



In the complex world of today's data center, APC's service philosophy remains simple: by maximizing system availability we ensure maximum customer satisfaction. In fact, APC Global Services (AGS) exceeds the industry standards for efficiency, adaptability, and speed of response.

Building upon APC's advanced product engineering and predictive management software, AGS prevents problems throughout the life cycle of the data center, with services such as planning and installation, remote monitoring, and preventive maintenance. Staying a step ahead of industry trends and requirements, AGS supports your investment from the time of product purchase throughout the life of the hardware.

Our adherence to a rapid escalation of response policy and a defect correction and avoidance process ensures both customer satisfaction and continual system improvement. When you purchase from APC, you benefit from APC's active research and development program, as well as from a group of highly trained experts committed to maximizing and maintaining your system availability.



APC Defect Correction and Avoidance Process

Part of APC's commitment to Total Quality Management (TQM) is our adherence to a rigorous defect correction and avoidance process. When a customer notifies us of a problem, the process begins – but not ends – with our escalation policy. Additionally, our rapid response team of product experts, the AGS Tiger Team, reports their findings to APC Platform Engineering. This, in turn, triggers problem identification and resolution within APC's research and development division, manufacturing, and with APC suppliers. Once corrective action is determined it is put into place by Product Management. The process comes full circle when Product Management reports on the correction to the AGS Regional Manager, so he or she can share the outcome of the defect correction and avoidance process with the customer who had the initial problem.





Time Warner Cable

"APC support is consistent and rock solid. APC responds to our needs and the reliability of the support is a key cornerstone of our relationship moving forward. We have had the InfraStruXure™ installed for several months now and we have basically ignored it. Such a stable solution allows us to focus on the task of exceeding the expectations of our customers."

Vince Pombo | Vice President of Engineering | Rich Flanders | Director of Engineering
Time Warner Cable

Needs Assessment Service

Power Assessment, Cooling Assessment, Thermography, Blade Readiness

Our APC Authorized Field Service Engineer will visit your site and collect data pertaining to electrical loads, wiring practices, power quality, existing power protection equipment and environmental conditions

- Customized report
- Environmental inspection
- Labor and travel expenses included



Project Management

Installations, Upgrades and Removals

Our industry experienced project managers are trained to guide project coordination, communication and project budget management to assure your projects are completed on schedule and within budget

- Written summary report
- Single point of contact
- Labor and travel expenses included



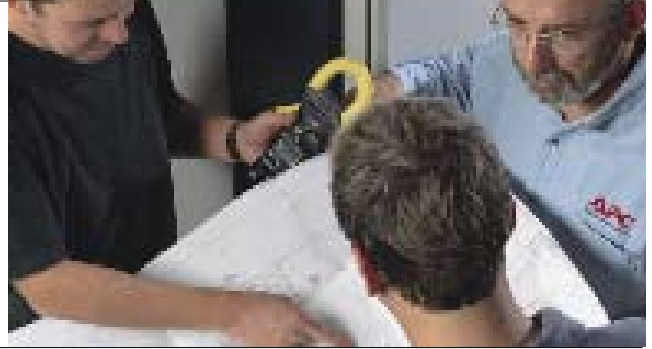
SERVICES

Factory Acceptance Testing

Factory pre-tested system reduces downtime

An APC Certified Field Service Engineer will verify all connections within the system have been made according to factory specification, and that it is functioning correctly in all modes of operation, ensuring optimal performance and extending the life of the product

- Equipment positioning
- Physical assembly
- Installation verification



Assembly

Vital Resources, Expertise, and Tools

From rack assembly to module installation and internal wiring, APC will put together all the pieces of your solution

- Labor and travel expenses included
- Logistics coordination
- Module installation



Start Up

5x8 Service Scheduling, 24x7 Upgrade option

An APC Certified Field Service Engineer will verify all connections within the system have been made according to factory specification, and that it is functioning correctly in all modes of operation, ensuring optimal performance and extending the life of the product

- Functional and installation verification
- Labor and travel expenses included
- APC solution operational training



Network Integration

Software Integration, Server Migration and Cable Management

From server migration and cable management to software installation and configuration, APC Global Services Network Integration Engineers can assist in all tasks associated with your move to a new system

- APC certified software engineer
- Labor and travel expenses included
- 24 x 7 off-hours service scheduling



Customer Orientation/Training

Learn from industry-proven professionals about topics ranging from power quality to infrastructure cooling requirements



Remote Monitoring

Expert outsourced monitoring via APC's InfraStruXure™ Manager

An APC professional service that securely monitors your power systems and surrounding environment from a remote 24x7 operation center, responding to events according to a predefined customer escalation procedure

- On-demand trending reports
- Online Alarm/Event Reports
- Environmental Monitor and Alarm notification



On Site Services

4-hour Response, Next-day Response, Next Business Day Response

APC On Site Services are designed to get you the help you need on location to bring your business back up and running in a time frame compatible with your business requirements

- On site troubleshooting
- Parts included
- Labor and travel expenses included



Preventive Maintenance

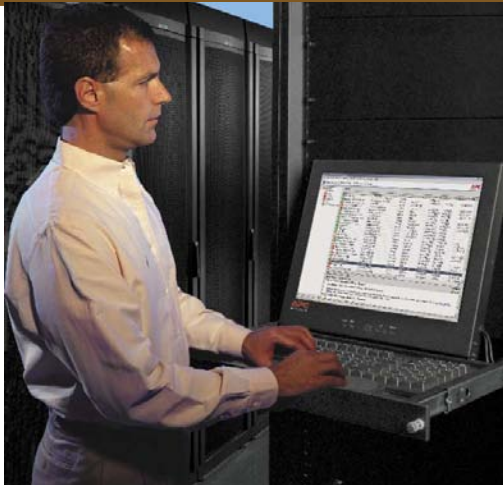
Quarterly, Semi-annually, Annually and Battery Replacement

Proper care and regular maintenance will help you avoid unnecessary downtime, saving you time and money

- System cleaning and environmental inspection
- Corrective maintenance
- Free firmware upgrades and logistics coordination



MANAGEMENT



Whether managing a single device, multiple devices, or a mixture of device types, APC management solutions are easy to use and deploy. The solutions work together and independently, allowing you to monitor devices locally over existing IT networks or the Web, and to be notified of problems within the system via email or pager gateway notifications. They provide information on issues affecting system availability, reduce the burden of system management and adapt to changing business needs.

UPS MANAGEMENT

UPS Network Management Cards

Embedded management of UPSs protecting servers and networking equipment

Available with environmental monitoring and out-of-band capabilities

- Manage your UPS over the network
- Mass configuration wizard
- Reboot equipment remotely



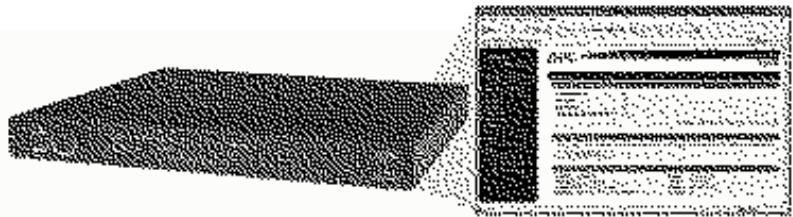
BATTERY MANAGEMENT

Battery Management System

Smart-charging and remote battery management for stationary batteries

Both base unit and expansion module available. Battery harnesses available in a variety of lengths.

- Individual battery monitoring and charging
- Ripple current monitoring
- Browser-accessible



SERVER ACCESS MANAGEMENT

Console Port Servers

Secure, remote management and system recovery for servers and networking equipment

8-port, 16-port, 32-port horizontal; 42-port vertical

- In-band and out-of-band management reduces response time, improves efficiency, and maximizes uptime
- Comprehensive security support protects IT assets from hackers and other unauthorized individuals
- Multi-session capabilities allows concurrent usage by more than one administrator for fast and effective troubleshooting



NETWORK-CRITICAL PHYSICAL INFRASTRUCTURE (NCPI) MANAGEMENT

InfraStruXure™ Manager

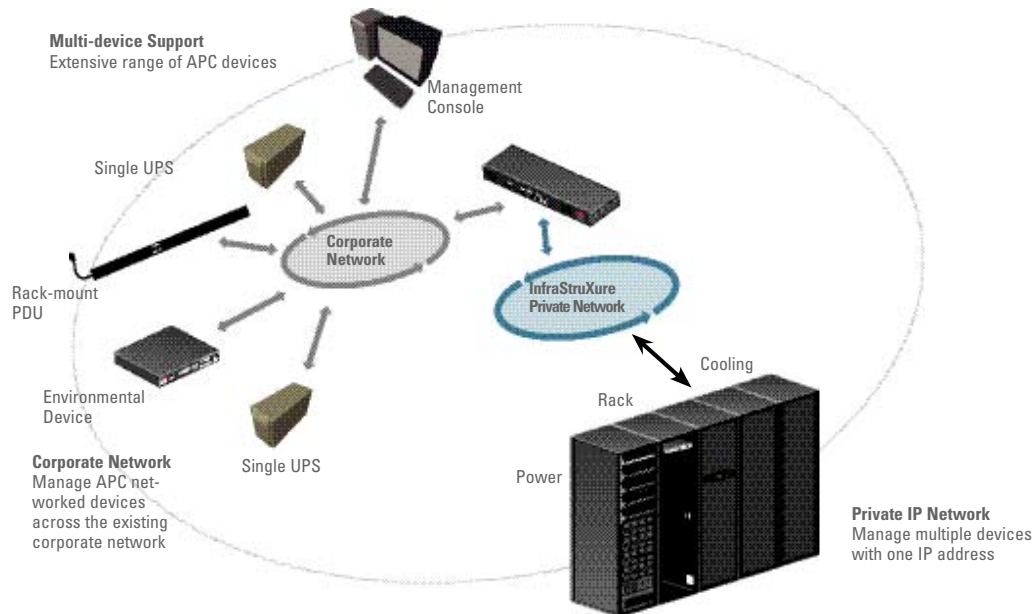
Centralized, Web-accessible management of your APC Network-critical Physical Infrastructure

Appliance with licenses for 25, 100, 500 or 1000 devices

- Centralized management enables you to monitor and configure the entire APC infrastructure from a single console
- Concurrent deployment and updates of managed devices decreases set-up time by simultaneously configuring settings or upgrading firmware for multiple devices
- Manage network and building management systems from a single system
- Integrates with InfraStruXure Designer for ease of navigation and improved monitoring, minimizing errors and cost
- kWatt per rack instrumentation and thresholds allows for quick assessment of power consumption and power availability in racks
- Load balancing increases power availability
- Battery and runtime reports facilitate timely replacement of UPS batteries and pinpoint UPSs requiring additional runtime



Manage APC Devices on the Corporate or Infrastruxure™ Network

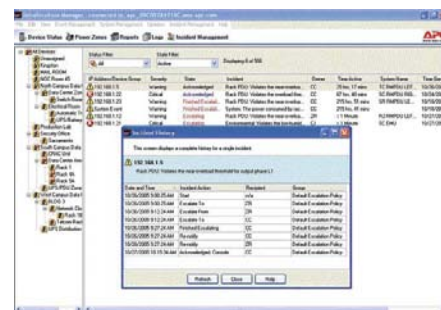


InfraStruXure™ Incident Management Module

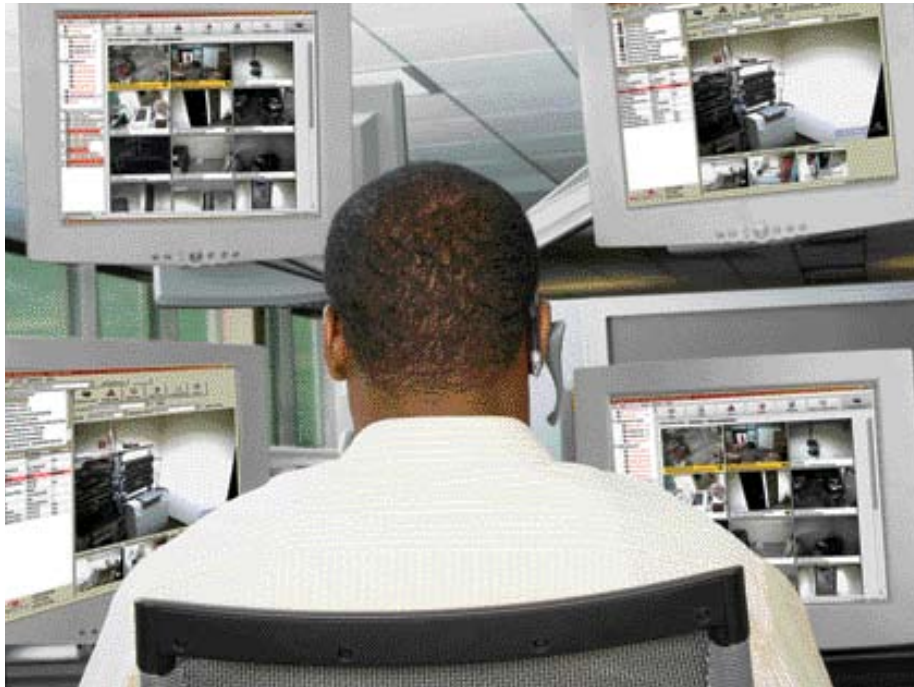
Notification and event analysis for managing Network-critical Physical Infrastructure

Add-on module for APC InfraStruXure™ Manager

- Prioritized urgency level, alerts the user to impact, urgency and priority of individual events threatening availability
- Incident acknowledgement, enables fast and thorough incident review allowing users to take ownership of alarms
- Incident history reports, monitor resolution times and workloads
- Workload management, helps designate appropriate people, manage individual workloads and enable accountability
- Customized escalation policies, helps establish and confirm a policy appropriate to your organization ensuring the right people are notified for fast problem resolution



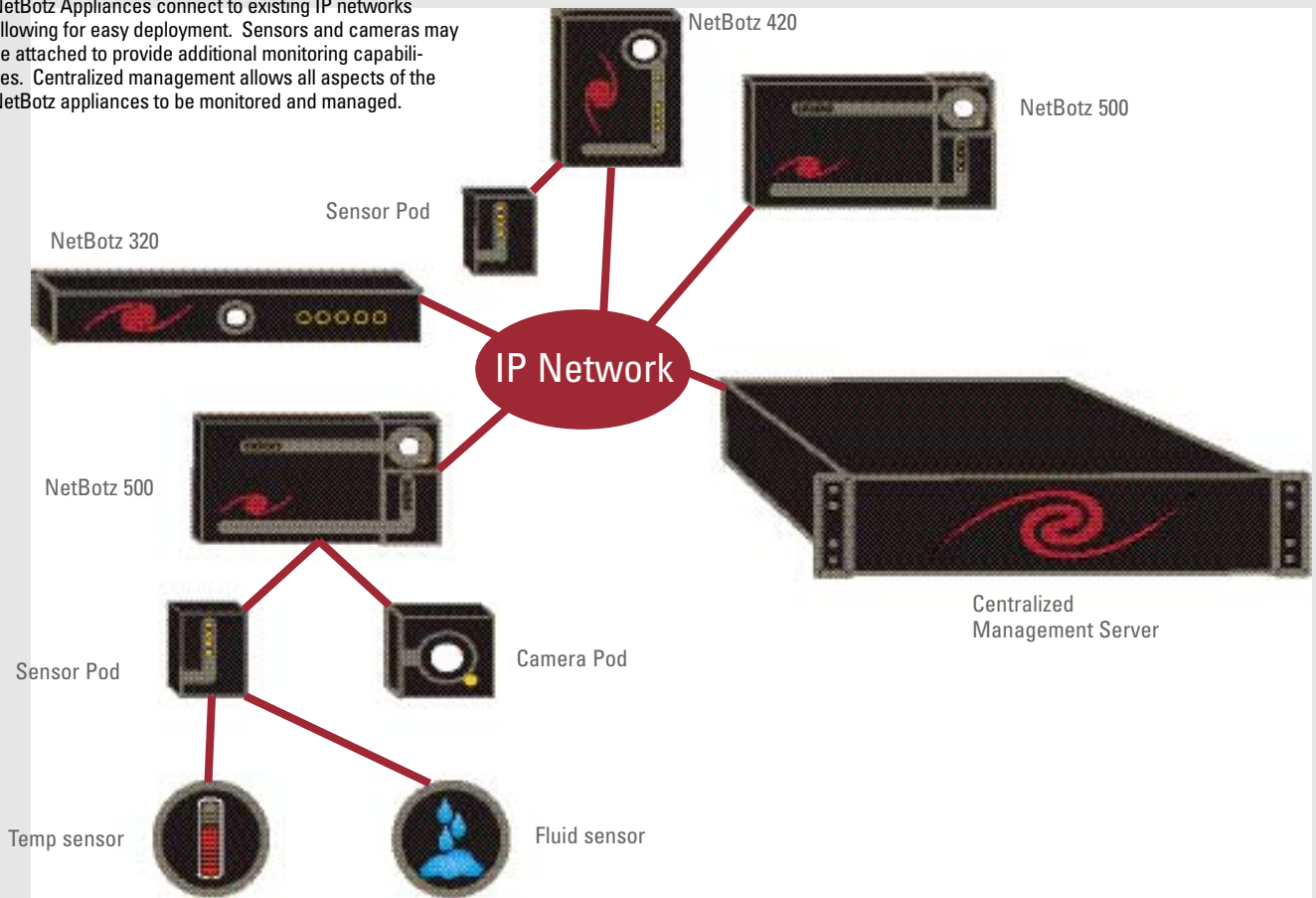
SECURITY AND ENVIRONMENTAL



Real time monitoring of your IT infrastructure for physical threats should be a key component of IT administrators overall strategy to ensure availability and prevent downtime. APC's Security and Environmental monitoring solutions provide the capability of detecting and alarming when a threat has been identified. From a single IP enabled device, administrators can monitor for environmental threats such as temperature, humidity, leak as well as intrusion detection and real-time video surveillance.

NETBOTZ MONITORING SOLUTION

NetBotz Appliances connect to existing IP networks allowing for easy deployment. Sensors and cameras may be attached to provide additional monitoring capabilities. Centralized management allows all aspects of the NetBotz appliances to be monitored and managed.



Surveillance

Create a visual record of who enters secure areas and what they do while there

Wall- and rack-mount appliances with cameras

- Capture video in response to motion, door opening, and more
- Sort and search recorded clips by many criteria



Environmental

Protect your Network-critical Physical Infrastructure from environmental threats

Wall- and rack-mount appliances

- Protect against damage due to heat, humidity, water, smoke, dust, and much more
- Multiple thresholds for each sensor allowing for notifications at the informational, warning and critical levels
- Various types of alert actions allow notifications to be sent to SNMP managers, email systems, and web servers



Access Control

Network appliances enabling remote and local authentication for your APC rack enclosure

Proximity-enabled rack access system

- Audit trail allows for troubleshooting and record-keeping
- Local authentication for front and rear door of rack
- Access alarms based on remotely configurable settings



Accessories and Sensors

Extend the capabilities of your monitoring appliances

Pods, external sensors, cables, and mounting brackets

- Position sensors at desired monitoring points
- Support wide variety of analog and digital sensors via dry contact, 4-20mA, 0-5V
- Mounting and deployment hardware supports flexible placement of appliances and pods



Centralized Management

Central server that enables management and monitoring all of your NetBotz® appliances

Standard and enterprise servers available

- Centralized management, configuration and administration gives you a 24x7 real-time view into the status of your environment
- For use in a single data center, multiple data centers, or IDF/MDF closets



PHYSICAL THREAT NETBOTZ MONITORING SOLUTIONS ADDRESS MULTIPLE RISK AREAS

Environmental Disruption

The #1 physical cause of downtime at remote locations, environmental problems go beyond worries of fires and floods. Ventilation and power are key points of exposure and become more so as equipment density increases.

Human Error

We call this the "unspoken epidemic" because no one likes to discuss human error and the tremendous impact it can have on availability. However, it's the second greatest physical cause of downtime in remote or unsupervised locations because systems are often housed in janitor closets, wiring closets, and other less-than-optimal settings.

Physical Theft

As assets become smaller and more efficient, they become more attractive targets to steal. Physical attacks against digital assets are often overlooked and are a source of real concern.

Sabotage

On everyone's minds as a result of current events, terrorism must be given due consideration, regardless of cost.

There may be threats within your own building from disgruntled employees who may strike and, without any prevention, succeed.

COOLING

Ensuring the proper environment for IT systems is essential to maintaining high availability. Regardless of application, IT equipment produces heat that can be damaging to both uptime and the longevity of your investment. Data center cooling has become increasingly unpredictable due to the use of blade servers and other high-density equipment.

APC promotes in-row cooling, where the cooling unit is moved closer to the source of heat generation, and containing the hot aisles of the data centers to address this challenge.

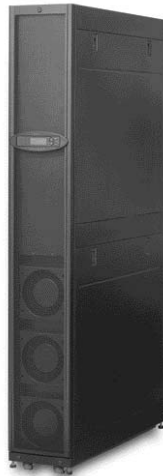
APC cooling solutions are tailored to meet the needs of your environments, from wiring closets and server rooms to data centers of all sizes. Scalable solutions, including air distribution/fans, portables, and precision cooling systems, are available to provide the right solution to meet the unique cooling requirements your environment demands, from low to very high densities.

MODULAR / HIGH DENSITY AIR CONDITIONING

InfraStruXure™ InRow SC

InRow predictable air conditioning for wiring closets and server rooms

- Placing the unit in the row of racks moves the source of cooling closer to the heat load. This helps to eliminate air mixing and provides a predictable cooling architecture
- Self-contained, air cooled solution allows for plug-and-play installation to minimize installation time and costs
- Network manageable via Web, SNMP, and Telnet
- Automatic restart in the event of a power outage
- Freeze up protection maximizes availability
- Dual ducted design increases cooling efficiency
- Condensate pump and duct kit included
- Available in DX



InfraStruXure InRow RC

InRow air conditioning for medium to large data centers including high density applications

- Draws power from UPS for power protection with dual feeds for redundancy
- Hot-swappable fans allow unit to remain operational if a fan replacement is required
- Modular design provides scalable solutions to add cooling as demand increases
- Variable speed fans reduce energy consumption during off-peak cooling periods
- Rack inlet control guarantees inlet temperature to IT equipment



InfraStruXure InRow RP

InRow precision air conditioning for medium to large data centers including high density applications

- Humidity is managed through a self contained steam canister humidifier for maximum efficiency and ease of maintenance
- Modular design provides scalable solutions to add cooling as demand increases
- Variable speed fans reduce energy consumption during off-peak cooling periods
- Rack inlet control guarantees inlet temperature to IT equipment
- Available in chilled water or DX



InfraStruXure Cooling Distribution Unit (CDU)

Flexible chilled water distribution system for the InfraStruXure™ InRow RC

- Flexible piping allows quick deployment and startup
- Seamless piping minimizes the risk of fluid leaks in the data centers
- Allows isolation of cooling circuits for servicing
- Provides a central point for fluid balancing



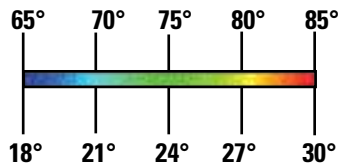
Hot-Aisle Containment System (HACS)

Hot-aisle containment for high-density configurations

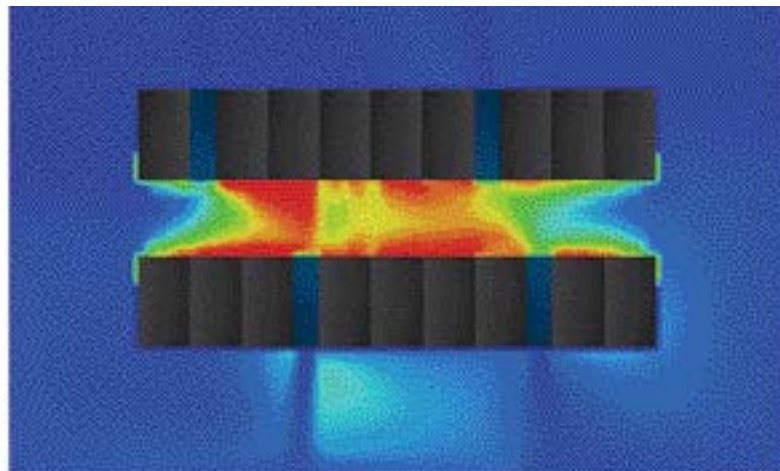
- Hot air containment eliminates hot spots by preventing hot air recirculation into sensitive IT equipment
- Scalable densities allows for higher density cooling to be achieved by integrating the Hot-aisle Containment System with in-row architecture
- Scaleable design allows for quick deployment of high density clusters and addresses changing needs and future expansion with pay-as-you-grow architecture



Temperature



Hot exhaust air from the IT equipment is contained within the hot aisle to eliminate mixing for a predictable cooling architecture. Hot air is removed via the InRow cooling units and discharged to the room.



Rack Air Containment System (RACS)

Modular, flexible containment system designed to maximize InRow cooling predictability, capacity, and efficiency

- Increases InfraStruXure™ in-row cooling efficiency
- Allows for higher InfraStruXure in-row cooling capacity
- Increases cooling predictability within the IT environment
- Retrofittable to existing in-row and NetShelter® SX rack installations
- Full containment version provides isolation for installed IT equipment from installation environment
- Full containment version reduces audible noise



COOLING

ROOM AIR CONDITIONING

NetworkAIR™ FM

Modular floor mount precision air conditioning for environmentally sensitive equipment areas

- Direct drive motors allows integral fan/motor assembly to be factory balanced, lowering vibration and expedites startup
- Variable frequency drives allow for soft starting of fans, saving energy during power up
- Redundant group control allows up to 4 groups of precision air conditioners to communicate with each other for redundancy, demand fighting prevention, mode assist, and global sharing of certain settings

*Subject to regional availability

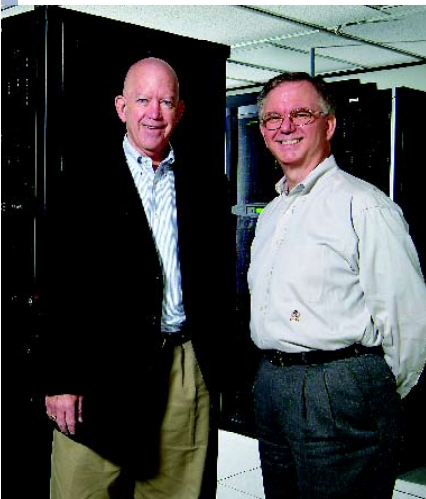


NetworkAIR™ PA 4000

Portable, self-contained air conditioning solutions for wiring closets and server rooms

- Portable, compact design provides flexibility to move the unit wherever cooling is required
- Network manageable via web, SNMP, or Telnet
- Automatic restart feature returns unit to its last operating status in the event of a power failure
- On/off scheduling
- Freeze up protection
- Condensate pump and duct kit included
- Dual ducted design

*Subject to regional availability



BE AEROSPACE

"We decided to purchase the APC NetworkAIR™ to handle our precision air requirements. The NetworkAIR units are high quality. Compared to some of APC's precision air competitors, the APC NetworkAIR costs less and has a much faster delivery time. In addition, it was much easier for us to deal with one vendor to integrate the data center solution and we felt we would get better support from APC. We figure that our consolidation project has contributed significantly to our cost reduction efforts. APC InfraStruXure™ and NetworkAIR are key components which have helped us to realize these savings."

Evan Stewart, CIO and Sam Villegas, Partner Relations, **BE Aerospace**

AIR DISTRIBUTION AND FANS

Rack Air Removal Unit

Value and performance heat removal solution for high density loads

- Ducted exhaust system removes hot air to prevent re-circulation and eliminate air mixing
- Power or temperature controlled fan speed ensures proper amount of heat removal
- Zero 'U' solution mounts to the rear of the rack leaving valuable rack space free
- Supports up to 16.5kW
- Integrated LCD display and network manageability



Air Removal Unit Ducting Kit converts rack air removal unit to ceiling to duct air from the room

Rack Air Distribution Unit (ADU)

Air distribution for power dense enclosures and low-pressure areas

- Raised floor duct pulls supply air directly into the enclosure to prevent re-circulation and air mixing before reaching equipment
- Minimizes temperature differences between the top and bottom of enclosures
- Delivers air to equipment in the rack where floor tile velocity is inadequate for proper cooling



Rack Side Air Distribution Unit (SADU)

Air distribution for networking equipment with side to side airflow

- Allows for greater security and organization by allowing racks to be placed adjacent to one another without impeding airflow
- Extends equipment life by pulling conditioned air from the front of the rack and distributing the proper inlet temperatures to side air intakes of networking equipment
- Delivers air to equipment in the rack where floor tile velocity is inadequate for proper cooling



Wiring Closet Ventilation Unit

Rapidly deployable wall and ceiling mount heat removal for wiring closets

- Wall and ceiling mount options provide installation flexibility
- Dual fans provides fault tolerance in the event of fan failure
- Selectable fan speed provide optimization of performance
- Dry contact outputs allow remote failure notification for enhanced availability
- Designed for simple, fast installation



RACKS



The APC NetShelter® is the only framework for InfraStruXure™ solutions. Once concerned with environmental design at the room-level, consulting engineers now direct their attention to power distribution, cooling, and cable management at the rack level. The driving force behind this shift is technology compaction, as today's IT equipment is designed with efficient rack-mounting capabilities to maximize the utilization of valuable floor space. The ideal rack enclosure maximizes flexibility with a progressive, non-proprietary feature-set as well as an extensive line of scalable accessory products to address current needs and adapt to future technology trends. APC NetShelter® rack systems provide the most progressive feature-set available in a vendor-neutral rack environment while allowing the user the flexibility to quickly adapt to emerging trends. Available in a variety of heights, widths, and depths, NetShelter racks and enclosures support applications ranging from branch offices and wiring closets to enterprise data centers. With an extensive line of leading-edge power distribution, cooling and cable management accessories, APC offers the most comprehensive rack solutions to protect the critical components of the IT environment.

ENCLOSURES

NetShelter® SX

Enclosure offering advanced cooling, power distribution, and cable management for server and networking applications

600mm wide x 1070mm deep, 42U or 48U, including casters, doors, inherent grounding, installation guide, levelling feet, mounting hardware, roof and side panels

- Increased door ventilation and other cooling options to accommodate higher density applications
- Facilitates overhead cable management
- Multi-vendor equipment compatibility

NetShelter® SX Wide

These wider models are ideal for networking applications where demanding cable management requirements reside or for a mix of server and networking equipment in the same enclosure

750mm wide x 1070mm deep, 42U or 48U, including casters, doors, inherent grounding, installation guide, levelling feet, mounting hardware, roof and side panels

- Facilitates front to rear and vertical cable management
- Increased room for rack PDU mounting and access
- Multi-vendor equipment compatibility



RACK POWER DISTRIBUTION

Metered Rack Power Distribution Unit

Power distribution units that monitor the aggregate power consumption of connected equipment

Up to 14.4kW, horizontal or vertical-mount

- Local current monitoring display
- Alarm thresholds and network management

Switched Rack Power Distribution Unit

Power distribution units that remotely control power to individual outlets and monitor the aggregate power consumption

Up to 12.5kW, horizontal or vertical-mount

- Remote Individual Outlet Control
- Power sequencing
- Alarm thresholds and network management
- Flash upgradeable

Pictured - Metered Rack PDU



RACK ACCESSORIES

1U Modular Toolless Blanking Panels

Modular 1U plastic blanking panels allow quick and easy installation in any EIA-310-D compliant square hole mounting rail rack or enclosure

- Toolless mounting
- Available in quantities of 10 or 200



Cable Containment Brackets

Cable management accessory to help eliminate cable stress and maintain a neat, organized cable layout within an enclosure or a rack

Includes 4 flat brackets, installation guide, mounting hardware and 4 C brackets

- Facilitates rear/vertical cable management
- Organizes data and power cables
- Provides mounting options for PDUs



OPEN FRAME RACKS

Open Frame Racks

Low cost mounting solutions with advanced power distribution and cable management features for server, networking, and telecom applications, where security at the individual rack level is not required

2-Post and 4-Post Models

- Unobstructed airflow
- Fast, easy access to installed equipment
- Numbered U positions



RACKS

2U Horizontal Cable Organizer w/ Pass-Thru

Cable management accessory to help eliminate cable stress and maintain a neat, organized cable layout within an enclosure or a rack

Includes mounting hardware

- Facilitates front cable management
- Front to back feed-through holes
- Integrated front cable hoops



Cable Tree

Rear cable management trough designed for the NetShelter® SX rack

Includes installation guide, mounting hardware, mounting straps and one tray

- Facilitates rear/vertical cable management
- Organizes data and power cables
- Works with both the 42U and 48U models



Side Channel Cable Trough

Cable management accessory to help eliminate cable stress and maintain a neat, organized cable layout within an enclosure or a rack

Includes installation guide and mounting straps

- Adjustable mounting depth
- Facilitates side cable management
- Toolless mounting



Vertical Cable Organizer for NetShelter® OU Channel

Cable management accessory to help eliminate cable stress and maintain a neat, organized cable layout within an enclosure or a rack

- Toolless mounting
- Facilitates rear/vertical cable management
- Occupies 0U of rack space

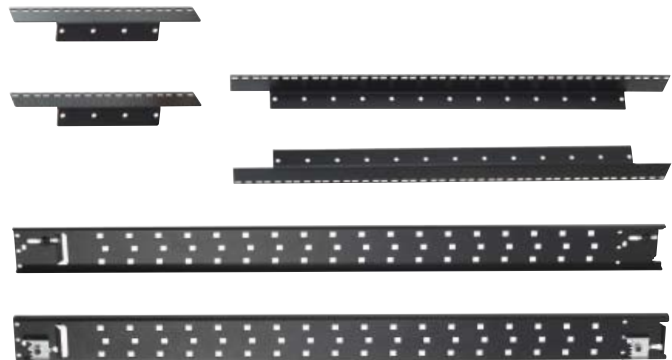


Recessed Rail Kit

Mount networking and server equipment in the same rack or enclosure

Includes installation guide and mounting hardware

- Adjustable mounting depth
- Multi-purpose mounting rails
- Multi-vendor equipment compatibility



Rack KVM

Manage multiple servers with just one keyboard, monitor and mouse

Analog, Analog CAT-5, and IP KVM switches available

- Troubleshoot servers and diagnose problems when the network is down
- Minimize space requirements, hardware costs, and power consumption
- Access servers in remote locations with IP KVM solutions



Rack LCD Monitor Keyboard Mouse

1U rack-mountable integrated keyboard, monitor and mouse

Includes cable management arm, rack-mounting brackets and user manual

- Low power consumption and cooling requirements
- Integrated touchpad pointing device
- On-Screen Display (OSD) capability



NetBotz™ Rack Access PX

Network appliance enabling remote and local authentication for your APC rack enclosure

Proximity-enabled rack access system

- Audit trail allows for troubleshooting and record-keeping
- Local authentication for front and rear door of rack
- Access alarms based on remotely configurable settings



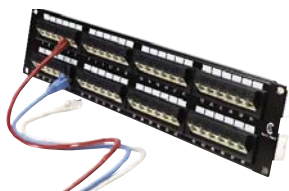
RACK CONNECTIVITY

Patch Panels

Manufactured to industry standards, to keep networks up and running

12 – 96 Ports, LAN and Telco

- Wire Management
- EIA/TIA Approved
- 110/Krone Termination



Network Cables

High quality networking cables that keep networks up and running

Cat 5, Cat 5e, and Cat 6



Data Distribution Cable

World's first factory tested, pre-terminated 24 pair Cat5e cabling solution

24 Pair, Cat5e PVC cable, with 6 pre-terminated connections in varying lengths



POWER



Symmetra PX (see description on page 36)

Power is vital to the Information Age. Without electricity, the machines that create, transmit, or store our data, help us communicate, entertain us, or assist us in a multitude of ways cease to operate. Today, every company depends on electronics to do business, and the effects of power-related downtime grow much more costly every day.

APC power solutions cover a wide range of business requirements. The more mission-critical the application, the higher the business need for minimized downtime, mandating continued operation through outages of any length. Some organizations might not require such high availability, but require automatic, safe shutdown of important software and operating systems, keeping important data secure. Any power solution should, at the very least, prevent physical damage to hardware from transients (surges, spikes, sags, etc.).

Over 15 million customers worldwide have turned to APC, the global leader in power availability solutions. Look through the following pages and contact us at any time to experience *Legendary Reliability™*.

NETWORK AND SERVER UPS

Smart-UPS® RT

Double conversion on-line power protection for space-constrained server rooms, voice and data networks

1-10kVA, Rack-Mount 2U-6U

- Hot-swappable/user-replaceable batteries ensure continuous operation of the load
- Scalable runtime: matching battery packs can be added to increase the runtime to the desired amount
- Hot-swappable battery replacement system minimizes downtime
- Manageable via PowerChute® Business Edition or UPS Network Management Card



Smart-UPS® XL

4th generation line-interactive power protection for servers, and voice and data networks

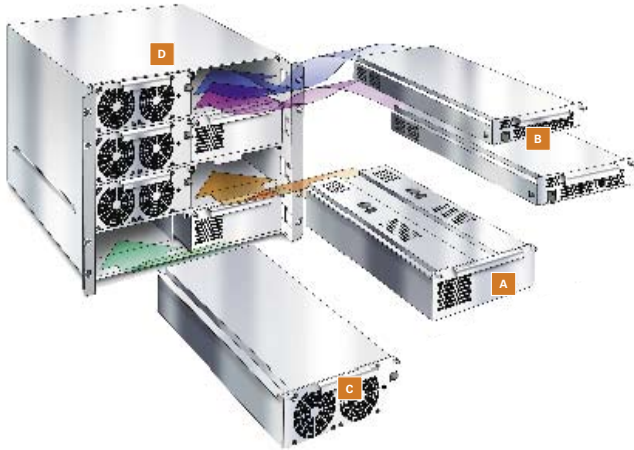
1400-3000VA Rack-Mount 2U-5U

- Hot-swappable battery replacement system minimizes downtime
- Manageable via PowerChute® Business Edition
- Matching battery packs can be added to meet changing needs



THE EUROPEAN UNION

Symmetra® is designed as a high availability system for mission-critical applications. N+1 redundancy ensures maximum uptime and near continuous availability. The modular design makes the Symmetra easy to scale, service, and manage.



A Battery Module: Scalable for more runtime, hot-swappable for easy replacement, N+1 redundant

B Intelligence Modules: Redundant Intelligence Modules that are hot-swappable

C Power Module: Provides flexibility to scale power, adds N+1 capability, hot-swappable

D Robust Frame with Automatic & Manual Bypass Switch: Enables the UPS to transfer the load to utility power, without interruption, in case of heavy overload or faulty conditions

Symmetra® LX

High-performance, redundant power protection for space-constrained server rooms, voice and data networks

4-16 kVA N+1 Rack-Mount

- Scalable power and runtime provides flexibility and lowers initial costs
- User-serviceable modules lower cost of ownership and mean time-to-recovery (MTTR)
- Manageable via UPS Network Management Card



"Since we have installed the APC units, the need to repair our PCs has decreased substantially, assisting us in driving down cost to the business. They help organizations like the European Union prevent network downtime which can save thousands of dollars in lost business and costly on-site service calls."

Antony Kamundi Head of the European Union's IT department
The European Union

DATA CENTER AND FACILITY UPS

Smart-UPS® VT

Performance 3-phase power protection with scalable runtime for small data centers

10 to 40kVA (10-30kVA in 208V, 20-30KVA 480V)

- New rack-based versions, with integrated power distribution available (208V/400V/480V)
- Scalable runtime with hot-swappable batteries for increased availability
- Low total cost of ownership (TCO) is achieved through best-in-class efficiency



POWER

DATA CENTER AND FACILITY UPS

Symmetra® PX

High-performance, redundant power protection with scalable power and runtime for data centers

10-80kW N+1

- Scalable power and runtime for flexibility and lower cost
- User-replaceable modules for ease of service
- Rack-based design speeds deployment



Symmetra® MW

High-performance, redundant power protection with scalable power and runtime for data centers and facilities

400kW to 1.6MW

- Easy system expansion with load sharing and scalable power modules provides adaptability to changing environments
- N+1 redundant fault-tolerant design provides high availability
- Self-diagnosing function and modular level repair reduce mean time-to-recovery (MTTR)



SCUDERIA FERRARI

"APC's InfraStruXure™ system provides us flexibility for our various computing power requirements, diverse software applications and deployment challenges, while providing a highly available data center. Today, our installed CFD calculation processes require hundreds of kW of power. APC and its InfraStruXure state-of-the-art modular solution supports us today and has the adaptability we need as we grow in the future."

Antonio Calabrese Head of the Information Systems
Scuderia Ferrari

SYMMETRA® MW PRODUCT OPTIONS



*Maintenance Bypass Panel
Line-up and match panel that
Incorporates a static bypass
switch to facilitate transfers
from UPS to bypass*



*External Bypass Static Switch
Line-up and match design
transfers the load from a
preferred source to an
alternate source without
interrupting the supply to
the load*

POWER DISTRIBUTION

InfraStruXure™ Power Distribution Unit

Configured to order, factory-assembled power distribution for space constrained medium to large data centers

3-phase 40, 60, 80, 150kW

- Wraparound system bypass isolates UPS from critical load*
- Local or Web-based monitoring for ease of management
- Front and rear access facilitates service

*Not applicable for 60 or 150kW PDU

Subject to regional availability

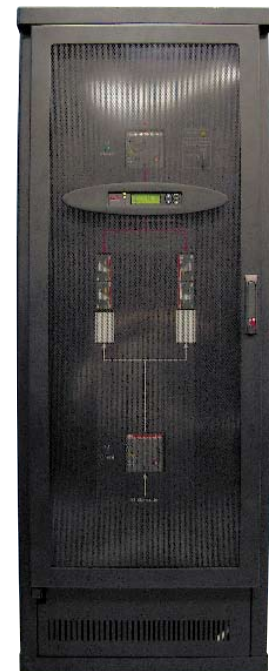


POWER GENERATION

Smart Distribution Panel with Automatic Transfer Switch

Manages and delivers redundant power paths to the InfraStruXure™ system

- The power distribution panel is integrated into the ATS, eliminating the need to install a separate distribution panel
- Monitors and controls APC's Standby Power Generation via the network



Standby Power Generator

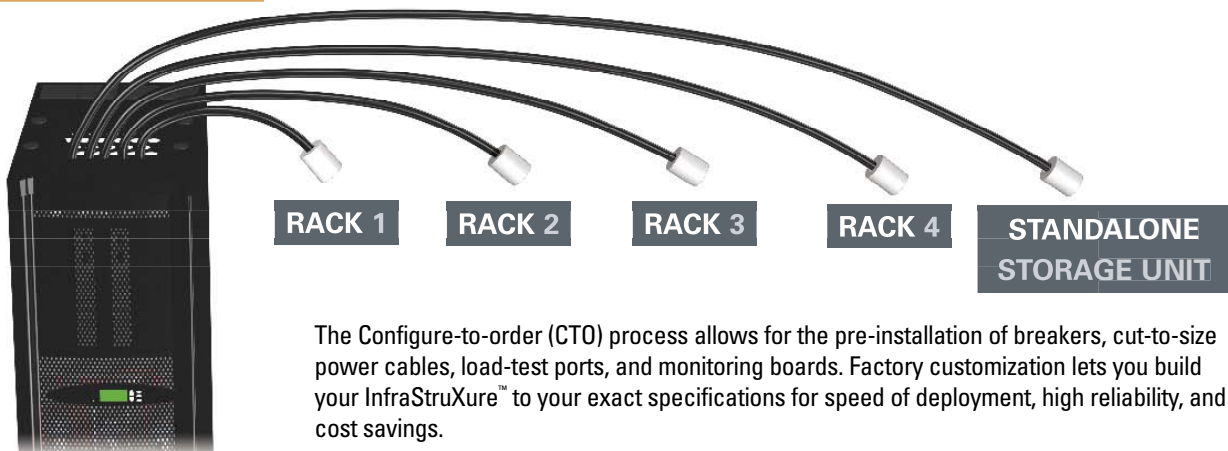
Diesel or fuel cell back-up power solutions for extended runtime needs

Sizes up to 200kW

- Increase runtime requirements from minutes to days
- Increases availability by monitoring generator status, runtime, and fluid levels (even when the generator is off)
- Automatically performs generator tests scheduled via network connection



CONFIGURE-TO-ORDER



The Configure-to-order (CTO) process allows for the pre-installation of breakers, cut-to-size power cables, load-test ports, and monitoring boards. Factory customization lets you build your InfraStruXure™ to your exact specifications for speed of deployment, high reliability, and cost savings.

APC DESIGN TOOLS

Choose from one of our pre-integrated **InfraStruXure™** solutions, or specify your requirements and get a **Price, Value, and Performance Recommendation**

Available via **APC Sales** or your preferred **APC Partner**

APC Estimator

The APC Estimator is a budgetary tool for data centers providing a high level recommendation for **InfraStruXure™** solutions. These customized systems are then built from standardized components which are modular, manageable and pre-engineered to work together.



InfraStruXure™ Designer - an advanced tool for customized solutions

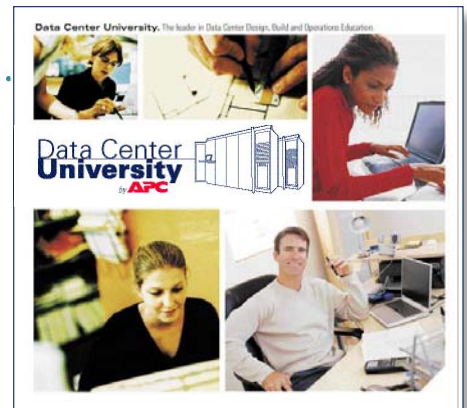
- **Rack Application Types** - Automatically populates racks with accessories, power distribution and environmental management products matching selected application type thus providing expert guidance based on APC best practice
- **Row Based Design** - Helps specify available IT rack positions and provides support for multiple cooling and power solutions within a single room
- **Supports new and existing data center environments** - Providing a planning and design tool for the whole data center life cycle
- **InfraStruXure™ Manager Integration** - Seamlessly integrating the floor layout into InfraStruXure Manager speeding deployment and giving a graphical representation of the data center
- **Flexibility** - Flexibility through free workflow and interactive design providing ability to configure equipment in any order at any time during the design process



Online Learning : Data Center University

DCU offers industry leading education for IT professionals, facilities managers, engineers and others involved with the Network-critical Physical Infrastructure (NCPI) of data centers. Our courses are developed by actual data center executives with decades of combined experience running some of the world's most advanced data centers. The courses address the core competencies required for Data Center Design, Build and Operations (DCDBO). Data Center University's curriculum centers around the education you need to solve real world issues in the data center.

www.datacenteruniversity.com



APC White Papers

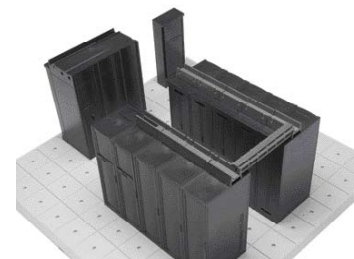
Do you and your staff know the top ten planning mistakes to avoid? The easiest way to improve cooling without spending a dime? Find these answers and more – in our latest selection of white papers. APC has spent almost \$70 million researching solutions to tomorrow's server problems. We talked to thousands of customers from Baltimore to Beijing and saw the good, the bad, and the ugly measures customers took in their data center planning. In many cases, turnover and budget cuts resulted in no plan at all. Take advantage of our valuable research today:

- WP-116: **Standardization and Modularity in Network-Critical Physical Infrastructure**
- WP-117: **Network-Critical Physical Infrastructure: Optimizing Business Value**

Visit <http://www.apc.com/products/infrastruxure/index.cfm>



InfraStruXure™ Multimedia Tour



Register for an interactive InfraStruXure™ tour

This self-paced, online tour is a quick and easy way to learn about InfraStruXure's™ innovative approach to Network-critical Physical Infrastructure.

Explore InfraStruXure for data centers on demand, and discover the very real benefits of its fully integrated power, cooling and environmental management within a rack-optimized design.

Surf the top level of typical InfraStruXure configurations, or drill down to the component level. Learn just what you need to know, at your own pace.

Start with a typical configuration and register. Once in the tour, you may view other configurations.

Visit <http://www.apc.com/products/infrastruxure/index.cfm>

NCPI Science Center

With more than 80 "must-read" white papers published on data center issues and technologies, our NCPI Science Center is actively investigating the problems of today and tomorrow. With lab-testing and field research to back up over 200 years of combined experience, there's no data center issue this tenacious team can't handle.

Download samples of their latest work at

Visit <http://www.apc.com/tools/isx/tcoindex.cfm>



InfraStruXure TCO Calculator

The InfraStruXure™ Total Cost of Ownership Calculator will compare APC InfraStruXure lifecycle costs to conventional Legacy data center architecture lifecycle costs.

Visit <http://www.apc.com/products/infrastruxure/index.cfm>



Fuel Cell Technology

Need extra runtime that you can rely on? Constrained by local generator restrictions? Check out our new, Fuel Cell based extended runtime option, fully integrated into the InfraStruXure™ architecture, and featuring the additional runtime you need for peace of mind!



Visit an APC Demo Center today! See the latest modular systems and NCPI solutions in one of our many APC demo centers around the world. Contact your local APC Sales Representative for details and appointment.

BLADEREADY™ Program Assures Peace of Mind

APC's BLADE READY™ Program unites complementary NCPI technologies to deliver products, solutions and services for blade NCPI environments.

Blade server power densities exceed the power and cooling capacities of virtually all data centers and produce a tremendous amount of heat. They also present unique challenges to the interoperability of your Network-critical Physical Infrastructure (NCPI). APC's BLADE READY™ Program unites complementary NCPI technologies to deliver comprehensive interoperable products, solutions and services for blade NCPI environments. To ease your blade implementation and enable operational excellence, look for industry vendors that carry the BLADE READY logo. To learn more:

Visit www.BladeReady.com or contact us via email: ProgramDirector@BladeReady.com

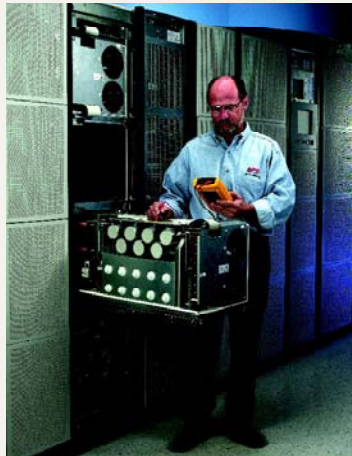


FACTORY ACCEPTANCE TESTING (FAT) LAB

APC announces a new Factory Acceptance Testing (FAT) Lab at its company headquarters in West Kingston, RI.

APC's new Factory Acceptance Testing (FAT) Lab provides customers with Factory Acceptance Testing of power systems for customers and parties involved in the design/build/specification process such as Consulting Engineers and Contracting channels. The FAT Lab also conducts Performance Testing, which provides an ideal venue to see demonstrations of APC Symmetra® MW's innovative modular design. Symmetra MW is the largest available static UPS and is ideal for large systems greater than 200 racks.

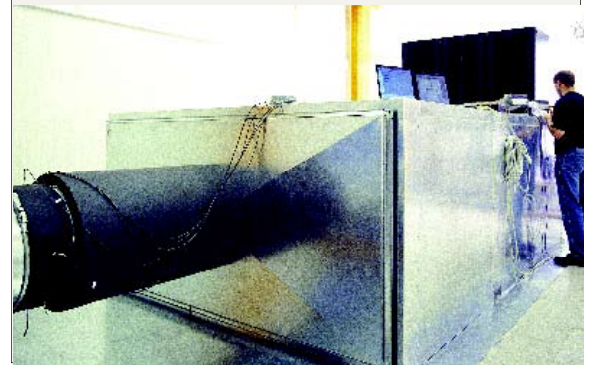
Specific testing performed at the FAT Lab includes System Efficiency Testing; Steady-State Load and Step Load Tests; Input Frequency and Input Voltage Variation; Utility Failure; Battery Performance; and Faults on System Inputs and Outputs.



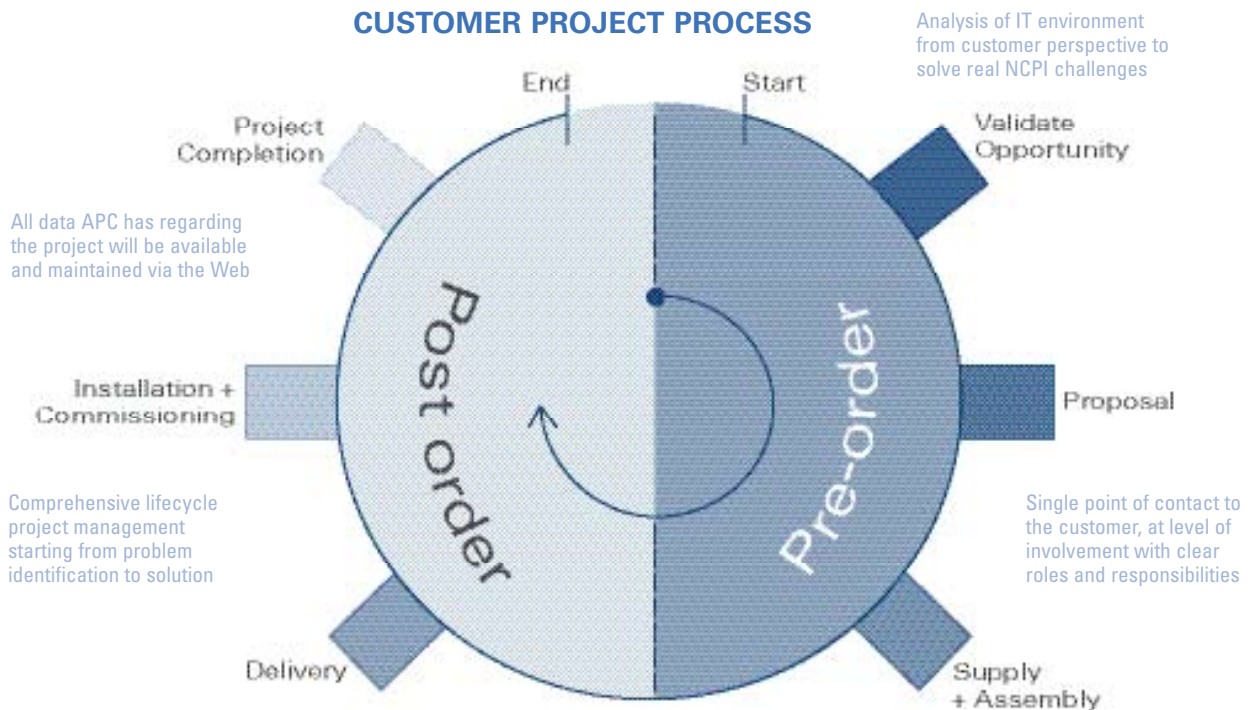
THERMAL TEST LAB

APC Thermal Test Lab enables testing of any type system in extreme environmental situations. This helps to ensure optimum availability, even for the most unique, conventional configuration.

APC Thermal Test Lab in Kolding, Denmark exemplifies our commitment to solving data center and server room challenges. This comprehensive thermal test lab contains two integrated chambers that allow concurrent simulations of both indoor and outdoor environment, fully supporting worldwide electrical power requirements.



CUSTOMER PROJECT PROCESS



Since 1981, APC has been a global leader in power availability solutions, setting the industry standard for quality, innovation, and support. From its corporate headquarters in West Kingston, Rhode Island, APC operates sales offices throughout the world and manufacturing facilities on four continents and distribution facilities on five continents. APC ships products to over 150 countries.

Over 15 million satisfied customers worldwide depend on APC's Legendary Reliability™. Propelled by real-world experience and a drive towards technological innovation, APC has the experience, scale, global presence, and stability to respond to emerging IT availability needs.

As the recipient of hundreds of awards worldwide, APC is recognized for excellence in both its business and product performance. Every year since 1999, APC has been named to the Forbes Platinum 400 list of the Best Big Companies in America. For 11 years in a row, APC has received the Channel Champion award in the UPS category.



Learn how multiple power problems can wreak havoc with your electronic equipment. Download the FREE APC White Paper "Standardization and Modularity in Network-critical Physical Infrastructure". Visit us online at <http://promo.apc.com> and enter key code **g309x**.



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